DOCUMENT RESUME

ED 237 422 SO 015 178

AUTHOR Norris, Neal; Salomon, Manjula
TITLE Futurism and Education: Some Perspectives for Global Educators. Occasional Papers Series, No. 3.
INSTITUTION Global Perspectives in Education, Inc., New York, N.Y.
PUB DATE Jun 83
NOTE 15p.
AVAILABLE FROM Global Perspectives in Education, Inc., 218 East 18th St., Box 76, New York, NY 10003 ($1.50).
PUB TYPE Viewpoints (120) -- Reports - Descriptive (141)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Course Descriptions; Creative Thinking; Decision Making; *Educational Improvement; *Futures (of Society); Global Approach; Higher Education; Prediction; Problem Solving; Relevance (Education); Secondary Education; Trend Analysis

ABSTRACT

A working knowledge of futurist perspective is becoming essential to educators. While global education acquaints students with their responsibilities as members of a group extending beyond their personal and local boundaries, futurism awakens students to the interconnectedness of past, present, and future. Although debate exists over whether it is an art or science, futurism is defined by Toffler and others as a methodology that clarifies and communicates future possibilities to decision makers. A course entitled "History of the Future" taught at the secondary school and college level illustrates how this perspective can prepare students to make choices among perceived alternatives that may be considered when examining historical, contemporary, and future issues. The course begins with an introduction to the concepts of change, progress, and the future through a study of nuclear weapons capabilities. This is followed by an examination of 25 American historical myths, a consideration of historical fallacy, and an exercise in creating models of historical development. In the next phase of the course, a study of futures planning and problem solving techniques culminates in an exercise in which students play a future president faced with approving a Congressional bill which legalizes the manufacture and sale of renucleated ova. The course concludes with a survey of emerging societal trends. (LP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED237422

OCCASIONAL PAPERS

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
✓ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
Charles Boebuck

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Futurism and Education

Some Perspectives for Global Educators

by Neal Norris and Manjula Salomon

no.3

SO 015 178

Introduction

From the very earliest times, the need to comprehend the human past has played a substantial role in humanity's development and self-understanding. Implicit in this need resides another, perhaps equally intense, need to make sense of the future. Moreover, this almost unconscious assumption of the future has been incorporated into the multitude of world views accepted by numberless human cultures, both past and present.

The need for consideration of the future historical dimension has grown significantly. This need is especially evident in education, since the image of the future accepted by educators plays a fundamental role in shaping student attitudes and perceptions regarding that future. Indeed, a multitude of social observers, representing almost every discipline, has underlined the need for studying about the future in the schools.[1]

Most of these commentators agree that our position in history differs from previous historical situations in several crucial respects. Humankind's current capacity to influence the global environment, for example, is unprecedented -- a result of the recent acceleration in the rate of scientific discovery. This acceleration, in turn, has led to the concentration of a cluster of basic problems of increasing complexity, magnitude, and interrelation that have never before existed on our planet.

Raymond Aron, the noted French sociologist, has called the last century-and-a-half nothing less than an "historical mutation." He has pointed out that during what he characterizes as the Second Thirty Years' War (1914-1945) the higher industrial civilizations have lived through the same history for the first time, thus leading to "the dawn of universal history" in the true sense of the phrase.[2] The industrialization process has led to the unparalleled growth of globe-spanning, productive and destructive forces. At the same time, there is an apparent accelerating pace of historical events. In as brief a period as the eight decades since the turn of the century, Czarism has been overthrown and replaced by a spreading Marxism; and European dominance in world affairs has been superseded by the two industrial superpowers -- the United States and the Soviet Union. The thirty years which encompassed two world wars began with a close-range revolver shot to the corseted abdomen of an Austrian Archduke and ended with the long-range atomic termination of two Japanese cities.

Although subject to the varied interpretations of future historians, it seems from our present perspective that we have reached some sort of historical turning point. Perhaps we have even stepped over the threshold into a critically transitional era -- one during which we simultaneously confront many converging crises of global proportions.[3] Fortunately, many perceptive educators and futurists have recognized that our society is involved in a serious and fundamental period of transition.[4]

Therefore, it seems plausible that part of the needed educational reformation should include a new perspective that actively explores the vital historical dimension of the future. The growing field of future studies education represents one such perspective from which to consider the much-needed transformation of educational thought and practice. Moreover, global studies educators, in particular, should carefully consider this futures perspective as they continue to develop their own theoretical assumptions and instructional strategies.

In attempting to "better prepare today's youth for effective citizenship in an increasingly interdependent world," global studies educators have emphasized the importance of widening students' horizons of awareness. They have also helped students recognize that the implications of their decisions and actions as individuals or as part of a larger group may very likely extend far beyond personal and local boundaries. Equally important, social studies educators have shown that far away events and decisions can significantly influence the lives of individual students.

Futurists, however, maintain that the implications of our decisions and actions must be viewed temporally as well as spatially. The ramifications of the decisions we make and actions we take now may be felt far into the future. In addition to the spatial interdependence of our planet (indeed, the cosmos), we are also affected by what may be called temporal interdependence -- the vital interconnections among past, present and future. The futurist, operating from this expanded spatial and temporal perspective, actively seeks to clarify, communicate, and create a vast array of future possibilities for others.

Our purpose here is to acquaint global studies educators with the origins and development of this futures perspective and to describe one way we have used the future as an organizing conception in our teaching efforts.

The Futures Field

The futures field as presently conceived is usually dated only from its initial institutionalization in the mid-1960s (i.e., the founding of the World Future Society in 1966), although the development of several philosophical, literary, educational, and technical aspects may be traced quite far into the past.

The past several decades have witnessed an increase in the number of futurist groups and organizations. The recent global proliferation of such groups and organizations has stimulated a vast debate concerning appropriate terminology. This debate has focused upon a pivotal theoretical question: Is the future knowable? Fred L. Polak, the renowned Dutch sociologist and philosopher, has argued for adoption of prognostics -- a word he coined -- as the representative term. By prognostics, Polak specifically means:

> "the science which, with advanced methods and instruments, aims at exploring the future and acquiring probable knowledge of the future. It is also the science which tries to control the future, based upon this systematic anticipation, by purposely guiding the future by socio-dynamic techniques. It comprises those areas of prognostic reflection, viz. concerning the possible, ideally essential and actually achievable future developments, in economic, social, technological, political, and cultural areas, and on both a national and a worldwide scale." [5]

On the other hand, one of the leading French futurist thinkers, Bertrand de Jouvenel, rejects such terms as Polak's "prognostics" precisely because they indicate a scientific underpinning to what the futurist forecasts. In the strictest sense, he argues, we cannot have knowledge of the future, since knowledge implies certainty and the future, if anything, is uncertain. Rather, the best we can do is conjecture, or offer an enlightened opinion about that future. De Jouvenel stresses the active nature of "l'art de la conjecture" by pointing out that possible futures must be constructed by means of "pro-ference: the action by which the imagination derives possible futures out of present states, which are known more or less well." [6]

Doubtless, de Jouvenel was, in *The Art of Conjecture (1967)*, reacting in some measure to the claims made for "futurology" by the German political scientist, Ossip K. Flechtheim, as recently as two years earlier at the Conference of Futuribles held in Paris. In the paper he presented there, Flechtheim asserted that "Our age of crisis does not permit us (sic), to treat 'futurology' as 'l'art pour l'art'. Our survival depends on the solution of a few core problems that have been vexing us since 1914." These core problems -- fear, want, religious and political intolerance -- could only be resolved by the newly-emerging science of futurology.[7]

Flechtheim, like Polak and de Jouvenel, has a particular meaning in mind when he refers to futurology as a science. He means science in its newer and broader definition as "a system of organized knowledge concerning the facts of a particular subject," rather than its more narrow original meaning of an exact science.

At another level, the futurological perspective is needed to overcome the four prevailing but estranged forms of reification: ideology, utopia, counter-utopia and the "end of ideology." And though futurology should offer a radical critique of the *status quo*, it should conceive of the future "neither as a utopian paradise nor as a counter-utopian hell. Its vision of the world of tomorrow is that of an ever-open, manifold, and contradictory universe full of potentialities and purposes."[8] Finally, Flechtheim steps beyond the art-or-science issue altogether to argue in favor of the need for the new branch of knowledge, however speculative and intuitive.

Alvin Toffler and several other American futurists have adopted a view similar to de Jouvenel's, pointing out the non-predictive role of current futurists and suggesting that they focus on "arrays of alternatives open to decision-makers."

A Futurist, then, may simply be a person whose primary goal is to make possible futures more real for others. Further, the role of the futurist is composed of three aspects: (1) the clarification of future possibilities; (2) the communication of these possibilities to others; and (3) the reification of these possibilities.[9]

Futurist curriculum educator Harold Shane, writing in 1973, also stressed the speculative nature and progressive character of futurist work when he defined a futurist as a person who "endeavors to foresee the

unforeseen or unexpected and to study its possibilities for improving the human condition." [10]

Several attempts have been made to capture the full range of futurist activity by relying upon various typological schemes. Toffler divides futurists into three groups: (1) *activists*, who "are driven by a passionate wish to induce social change"; (2) *methodologists*, chiefly concerned with quantification, forecasting techniques, and methods used to generate various images of the future; and (3) *speculators*, who concern themselves with larger questions of time and knowledge. [11]

In a similar manner, the historian-futurist Arthur Waskow, noted that the futurists attending the First International Future Research Congress seemed to be composed of three groups: (1) the *techno-planners*, concerned mainly with technological forecasting; (2) the *humanist social democrats*, hoping to move beyond the narrow planning mentality of the techno-planners, teaching the general public to think ahead; and (3) *participatory futurists*, a young and activist type seeking to create "chunks of the future" in the present. [12]

Other hypothesized elements of this future-oriented outlook have been suggested by Cornish, et al. (1977) and include: (1) an openness to diverse experience; (2) a global outlook; (3) a long-term time perspective (extending into the past as well as the future); (4) an ecological concern; (5) a wide-ranging concern for humanity; (6) a preference for rationality; (7) a pragmatic emphasis; (8) a view of decision-making that stresses the reality of choice; (9) a focus upon values; (10) a reasonable optimism; and (11) a strong sense of purpose. [13]

These typologies were not meant to be inclusive in any sense; they were presented as one brief means of describing the foundational characteristics and specific concerns of a futurist to those involved in global studies education.

A concrete instructional example of how global perspectives educators can begin to make future possibilities more real for their students will now be provided.

An Instructional Application

A growing number of perceptive educators is becoming aware of the powerful relationship between traditional history and its future aspect. Dr. Norman Henchey, Professor of Education at McGill University, actively included history in his theoretical attempt to build "a framework for

the study of the future." His historical approach underlined the usefulness of trend analyses, comparative studies, and scenario creation. Henchey explained this relationship in these words:

> "Historical approaches in a sense represent the most obvious orientation for the study of the future: the future as an extension of the past and present, the dialectic between *prospective* and *retrospective*. Rather than competing with future studies, history offers a good part of the substance from which we build the future, and in its analysis of trends -- their causes and effects -- it reminds futurists of the subjective character of all interpretation of data, the importance of criticism, and the need for perspective." [14]

Of the many programmatic goals mentioned in the appropriate research, the five most popular appear to be: (1) to examine and create alternative futures; (2) to clarify personal and societal values; (3) to interact humanely with the environment; (4) to cope effectively with change; and (5) to apply effectively the various futures planning and problem-solving methodologies. (Other fundamental goals include providing students with the skills, concepts and attitudes with which to understand complex systems and comprehend those issues that influence the future.) [15]

An example of one course created around such goals and emphasizing the development of futuring skills, concepts, and attitudes, is "The History of the Future" course one of the authors devised and taught during the past several years to secondary school and college students. The fundamental purpose was to create a course that would expand the traditional historical perspective by incorporating the present and future dimensions into the sphere of legitimate concern. [16]

The course is designed to prepare students to think in terms of making choices among perceived alternatives that may be considered when attempting to examine issues or solve problems relating to either the past, present, or future aspects of historical space and time. In broad terms, the course begins with some "very hard facts" from the present regarding humanity's rapidly expanding capability of destroying itself in exotic and painful ways. The first two weeks are devoted to an introduction to the concepts of change, progress, and the future, based on several readings and films depicting the human suffering of the Japanese popu-

lations at Hiroshima and Nagasaki immediately following the atomic explosions in early August of 1945. Discussion centers on the current implications of the destructive capacities of the weapons of the growing club of nuclear powers. The long-range psychological, genetic, and environmental damage of these weapons is explored to sensitize students to the frightening magnitude of existing, but often neglected, global realities.

Students at every level seem to comprehend the immediate implications engendered in nuclear war when they are given a map of their hometown on which to graph the destructive dimensions of a twenty-megaton bomb exploded on the town hall.[17]

Once the hidden dimensions of the possible consequences of these realities are examined, students begin to deal with what the author has called "the mythical component of present perceptions" by discussing at length some twenty-five of the most common myths Americans have acquired throughout their history. Prominent in these discussions are such myths as agrarianism, the melting pot, the Noble Savage, the American mission, the Benjamin Franklin syndrome, the Cherry Tree Fable, and the Better-To-Be-Single-And-Young syndrome. Several weeks are devoted to the identification and examination of these myths, as well as to the role they have played in the development of accepted values. American myths are compared to those in other countries to help students better understand the power of myth in determining beliefs and attitudes. Students are next introduced to the concepts of historical fallacy and causation and are given the opportunity to apply these concepts critically to several readings.[18] After they complete this study, several class sessions are devoted to a general study of various linear and cyclical theories of historical development.

Students are challenged to create their own conceptualization of historical development, and concrete models may be constructed to help explain their thinking to other class members.

The various models and their explanations lead directly into the next portion of the course -- the relationship of spatial and temporal conceptions to historical understanding. These concepts are explored by viewing *Experiments in Motion Graphics (1968)* and *Powers of Ten (1968)* and discussing readings that relate various cultural perceptions of space and time. There are several approaches to this section, the most

exciting of which involves consideration of the world population and food issue, Marshal McLuhan's "global village" concept, and the "Spaceship Earth" metaphor. Students' spatial and temporal horizons are further broadened by debating such topics as extraterrestrial life-forms, matter, anti-matter, and proto-matter; alternative and parallel universes; metagalaxies; geological epochs; and quarks.

In the next segment of the course -- learning to contend with complex issues -- students learn to apply various futures planning and problem-solving techniques. Brainstorming, trend analysis and extrapolation, cross-impact analysis, the Delphi method, the Culture/Society Model, and scenario construction are presented as some of the more popular tools to use in elaborating, analyzing, and evaluating various options regarding current or future problems.[19] Most students are captivated by the accuracy of some past predictions, forecasts, and scenarios of such people as Leonardo da Vinci, Alexis de Tocqueville, Charles P. Steinmetz, and Edward Bellamy. Erroneous past predictions are explored to discover their consequences on subsequent events.[20]

Students then apply these tools to a near-future thought problem. They are placed in the year 1993 in the position of a newly-elected President of the United States who is facing a potentially explosive dilemma. A bill has just been passed by a narrow margin legalizing the manufacture and sale of renucleated ova to all normal individuals twenty-one years of age or older. Students are asked to decide whether to reject or pass the bill by: (1) developing a scenario tracing the converging historical circumstances that led up to the present choice/point; and (2) using the Culture/Society Model as a basis for developing two exploratory forecasts describing (a) *the most preferable* future Culture/Society that could realistically be achieved if the bill were enacted, and (b) *the most probable* future Culture/Society that could occur. This "thought synthesizer" confronts the student with a serious and fundamentally moral dilemma to which may be applied some of the previously discussed futures problem-solving tools.

During the final weeks of the course, which takes place in and out of the classroom, students learn about emerging developments and trends in society. This final portion of the course concentrates on some possible new attitudes and beliefs that may prove helpful to the creation of a new value structure which would allow individuals and societies to

deal effectively with what some have termed the coming societal transformation.

"The History of the Future" course has been taught several times at the college level; parts of the course have also been taught successfully at both junior and senior high school levels. Students have generally expressed their enthusiastic approval of the multi-dimensional, interdisciplinary approach; the wide-ranging readings and handouts; the media presentations; and the fundamental nature of inquiry.

Many future-oriented courses such as the one just described have been developed and taught by educators in many parts of the country. The sheer variety, magnitude, novelty, and inter-relation of the fundamental issues we as a human species now confront should provide ample reason to reconsider seriously how contemporary education is conceived, organized, and transacted.

Far from being a mere educational fad that will soon disappear, the necessity of fundamentally reorienting educational thought and practice toward the future can no longer be ignored. If it is true that human beings living within advanced urban-industrial societies have passed beyond the time when it may have been historically appropriate and effective to reiterate the old sociocultural mythologies and translate them very literally into standard educational practice, then the future historical dimension must not remain at the margins of our thought. All educators must expand their thinking to include this future dimension and continuously strive toward making possible futures more real for others.

Footnotes

1 A list of authors who have commented upon the uniqueness and seemingly transformational aspect of our present era is too numerous to mention. Among many futurists this concept has become an implicit assumption. Of the multitude, the works of Raymond Aron, Kenneth Boulding, Peter Drucker, Don Fabun, Dennis Gabor, Willis Harman, Margaret Mead, John Platt, Harold Shane, L.S. Stavrianos, and Alvin Toffler should give ample indication of the pervasive acceptance of this conception. For a whimsical list of the various terms used to describe this era and our society, see Michael Marien, "Who Coined 'Post-Industrial Society'?" *The Futurist,* VII, 5 (December 1973), pp. 268-69.

2 Raymond Aron, *The Dawn of Universal History* (New York: Frederick A. Praeger, 1961), p. 10. Aron's application of the term "Universal History" may seem a bit premature though, since the highly industrialized nations comprise only a small portion of the total number of countries existing on our planet.

3 Several world historians, notably Geoffrey Barraclough, William McNeill, L.S. Stavrianos, and David Thompson, have described in detail what can be called "the globalization of history." See: Geoffrey Barraclough, *An Introduction to Contemporary History* (Harmondsworth, Middlesex, England: Penguin, 1967); C.E. Black, *The Dynamics of Modernization: A Study of Comparative History* (New York: Harper and Row, 1966); William McNeill, *The Rise of the West: A History of the Human Community* (Chicago: The University of Chicago Press, 1963); L.S. Stavrianos, *The World Since 1500: A Global History* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971) and his *The Promise of the Coming Dark Age* (San Francisco, California: Wilt, Freeman and Company, 1976); David Thompson, *World History from 1914 to 1968* (London: The Oxford University Press, 1969); and Lee F. Anderson, *Schooling and Citizenship in a Global Age: An Exploration of the Meaning and Significance of Global Education* (Bloomington, Indiana: The Mid-America Program for Global Perspectives in Education, 1979).

4 See Note One for a brief discussion and listing of authors describing this theme of transformation. The growing literature concerning the transformational theme includes the following basic works: Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (New York: Harper, Colophon Books, 1964); Zbigniew Brzezinski, *Between Two Ages: America's Rule in the Technetronic Era* (New York: Viking Press, 1970); Peter Drucker, *The Age of Discontinuity* (New York: Harper and Row, 1968); Willis W. Harman, "The Coming Transformation," *The Futurist,* Part I in XI, 1 (February 1977) and Part II in XI, 2 (April 1977); Robert L. Heilbroner, *An Inquiry into the Human Prospect* (New York: W.W. Norton, 1974); Herman Kahn and B. Bruce Briggs, *Things to Come: Thinking About the '70s and '80s* (New York: Macmillan, 1972); Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago Press, 1970); George B. Leonard, *The Transformation: A Guide to the Inevitable Changes in Humankind* (New York: Delacorte, 1972); Lewis Mumford, *The Transformations of Man* (New York: Harper and Brothers, 1956); and John R. Platt, *The Step to Man* (New York: Wiley, 1966).

5 Fred L. Polak, *Prognostics: A Science in the Making Surveys the Future* (Amsterdam, The Netherlands, 1971), p. 21.

6 Bertrand de Jouvenel, *The Art of Conjecture* (New York: Basic Books, Inc., 1967), p. 17.

7 Ossip K. Flechtheim, *History and Futurology* (Meisenhaim am Glam: Verlag Anton Hain, 1966), p. 109.

8 *Ibid*, p. 102.

9 This definition of a futurist has evolved into a fairly firm description of what members of the Futures Studies Program at the University of Massachusetts are about. The initial article was published by Jock McClellan and was entitled "What Is A Futurist?" *Futures Information Interchange,* III, 4 (December 1975), pp. 1-2. The idea was subsequently revised and published by John (Jock) McClellan and Peter Wagschal under the same title in *Pass Age*, 1976.

10 Harold G. Shane, *The Educational Significance of the Future* (Bloomington, Indiana: Phi Delta Kappa, Inc., 1973), p. 12.

11 Alvin Toffler, ed., *The Futurists* (New York: Random House, 1972), Introduction.

12 Arthur I. Waskow, "Towards a Democratic Futurism," *The Futurists* (New York: Random House, 1972), p. 93.

13 Edward Cornish, et al., *The Study of the Future: An Introduction to the Art and Science of Understanding and Shaping Tomorrow's World* (Washington, D.C.: The World Future Society, Inc., 1977), pp. 184-187.

14 Norman Henchey, "Building a Framework for the Study of the Future," *The World Future Society Bulletin* (September-October, 1977), pp. 1-9.

15 See especially Paul D. Burnim, *The Theoretical Development and Application of a Philosophy of Educational Future Studies*, Ed.D. Dissertation, (School of Education, The University of Massachusetts, 1976), p. 3; Cynthia B. Guy, *A Survey of Pre-High School Future Studies Programs,* Ed.D. Dissertation, (School of Education, The University of Massachusetts, 1978), p. 9; and Richard B. Stock, "Futures Studies in U.S. High Schools," *The World Future Society Bulletin, XI,* 3 (May-June 1977), pp. 1-6, and 4 (July-August 1977), pp. 13-18.

16 Neal A. Norris, "The History of the Future: A Multi-Dimensional Futures Approach to the Study and Teaching of History," *Futures Information Interchange,* Fall, 1978. See also Neal A. Norris, *Educating Toward Tomorrow: A Rationale for Introducing Futurism into the Secondary School Social Studies Curriculum,* Ed.D. Dissertation, (School of Education, The University of Massachusetts, 1982).

17 For a highly graphic article, see Erwin Knoll and Theodore A. Postol, "The Day the Bomb Went Off," *The Progressive* (October 1978), pp. 1-9. Also, see the excellent article by Catherine Quigg, entitled "Incident at Zion," *The Progressive* (September 1980), pp. 16-23.

18 The "Common Historical Fallacy" and "Causation Checklist" handouts were compiled from *A Preface to History*, by Carl G. Gustavson; *How To Study History*, by Norman F. Cantor and Richard I. Schneider; and *The Modern Researcher*, by Jacques Barzun and Henry F. Graff.

19 Neal A. Norris, "The Culture/Society Model: A Multi-Dimensional Context for Alternative Futures," *Futures Information Interchange,* IV, (April 1977), pp. 16-19.

20 Willis W. Harman, "The Coming Transformation," *The Futurist* (February and April 1977 issues).

ORGANIZATIONS

Earthrise
P.O. Box 120, Annex Station
Providence, RI 02901
(401) 274-0011

Futures Information Network (FIN)
c/o Manfred Kochen
Mental Health Research Institute
University of Michigan
Ann Arbor, MI 48104
(313) 764-2585

Institute for Alternative
Futures (IAF)
1624 Crescent Place, NW
Washington, DC 20009
(202) 265-0346

Institute for the Future
2740 Sand Hill Road
Menlo Park, CA 94025
(415) 854-6322

World Future Society
4916 St. Elmo Avenue
Washington, DC 20014
(202) 656-8274

EDUCATIONAL FUTURES RESOURCES

A. Selected Programs in Higher Education

1. The Program for the Study of the Future
   The Center for Integrative Studies
   The University of Houston at Clear Lake City
   2700 Bay Area Boulevard
   Houston, Texas 77058

2. The Program for Alternative Social and Educational Futures
   The Department of Social, Psychological and Philosophical Foundations of Education
   The University of Minnesota
   Minneapolis, Minnesota 55454

3. The Future Studies Program
   The School of Education, Room 110
   The University of Massachusetts
   Amherst, Massachusetts 01003

B. Selected Papers and Organizations, K-12

1. Eugene Beecher, *Futures and the Elementary School Curriculum.* Ph.D. Dissertation. Graduate College, Ohio University, 1975.

2. The Educational Futures Project
   Dr. Donald E. Glines, Director
   P.O. Box 2977
   Sacramento, California 95812

3. John Eggers, *1976 Directory of Elementary and Secondary Futuristic Schools and Programs.* The Center for Futuristic Studies, The International Graduate School of Education, Parker, Colorado, 1976.

4. Wentworth H. Eldridge and Billy Rojas, "Status Report: Sample Syllabi and Directory of Future Studies" in *Learning for Tomorrow.* Edited by Alvin Toffler (New York: Vintage, 1974).

5. Cynthia B. Guy, *A Survey of Pre-High School Future Studies Programs.* Ed.D. Dissertation. The School of Education, The University of Massachusetts, 1978.

C. Selected Journals and Periodicals

1. *Alternative Futures: The Journal of Utopian Studies*
   Merritt Abrash, Co-Editor
   The Human Dimensions Center
   Rensselaer Polytechnic Institute
   Troy, New York 12181

2. *Canadian Futures: A Journal of Technological Forecasting and Applied Futures Research*
   Don Wilson, President
   The Institute for Canadian Futures
   2323 Confederation Futures
   Suite 206
   Mississauga, Ontario L5B9 29
   Canada

3. *Footnotes to the Future*
   Mr. Kent Myers, Editor
   Futuremics, Inc.
   2850 Connecticut Avenue, NW
   Washington, DC 20008

4. *Futures: The Journal of Forecasting and Planning*
   IPS Science and Technology Press, Limited
   P.O. Box 63, Westbury House
   Bury Street, Guildford, Surrey 6U2 5PH
   England

5. *Futures Information Interchange*
   The Future Studies Program
   The School of Education
   The University of Massachusetts
   Amherst, Massachusetts 01003

6. *Futurics*
   Suite 900
   Minnesota Building
   Fourth and Cedar
   St. Paul, Minnesota 55101

7. *The Futurist: A Journal of Forecasts, Trends, and Ideas About the Future*
   The World Future Society
   4916 St. Elmo Avenue
   Washington, DC 20014

8. *Journal of Cultural and Educational Futures*
   Marlene Goldsmith and James Pearson, Associate Editors
   SPFE, 203, Burton Hall
   178 Pillsbury Drive SE
   Minneapolis, Minnesota 55455

9. *Scenario: The Futures Journal for Educators*
   The Educational Service Center
   120 East State Street
   Mason City, Iowa 50401

10. *World Futures*
    Ervin Laszlo, Editor
    Box 125
    The University of Houston at Clear Lake City
    2700 Bay Area Boulevard
    Houston, Texas 77058

END

DEPT. OF HEW

NAT'L INSTITUTE OF EDUCATION

ERIC

DATE FILMED

APR - 6 - 1984